

CLAIMS

1. A semiconductor device comprising:
a support base;
5 a thin film integrated circuit, an antenna, and a separating layer over the support base; and
a wiring electrically connecting the thin film integrated circuit and the antenna, wherein the wiring passes through the separating layer.
- 10 2. A semiconductor device comprising:
a support base;
a thin film integrated circuit, a separating layer, and an antenna sequentially laminated over the support base; and
a wiring electrically connecting the thin film integrated circuit and the antenna,
15 wherein the wiring passes through the separating layer.
- 25 3. A semiconductor device comprising:
a support base;
a thin film integrated circuit, an antenna, and a separating layer over the support base, wherein the thin film integrated circuit comprises a plurality of semiconductor elements; and
a wiring electrically connecting the plurality of semiconductor elements,
wherein the wiring passes through the separating layer.
- 25 4. A semiconductor device according to any one of claims 1 to 3, wherein the antenna is formed by one of a printing method and a droplet discharging method.
- 30 5. A semiconductor device according to any one of claims 1 to 3, wherein the plurality of semiconductor elements comprise thin film transistors, wherein each of the thin film transistors comprises a semiconductor film and a gate electrode with a gate

insulating film interposed therebetween.

6. A semiconductor device according to claim 5, wherein the antenna and the gate electrode are formed by patterning a same conductive film.

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7. A semiconductor device according to any one of claims 1 to 3, wherein the thin film integrated circuit and the antenna are formed over a substrate and then peeled off by removing the substrate, and stuck to the support base using an adhesive.

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8. A semiconductor device comprising:
a support base; and
a thin film integrated circuit, an antenna, and a separating layer over the support base,

wherein the antenna comprises a plurality of wirings connected in series, and
15 wherein at least one of the plurality of wirings passes through the separating layer.

9. A semiconductor device according to claim 8, wherein the thin film integrated circuit and the antenna are formed over a substrate and then peeled off the substrate by removing the substrate, and stuck to the support base using an adhesive.

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10. A semiconductor device comprising:
a support base; and
a thin film integrated circuit, an antenna, and a separating layer sequentially laminated over the support base,

25 wherein the antenna comprises a plurality of wirings connected in series, and
wherein at least one of the plurality of wirings passes through the separating layer.

30 11. A semiconductor device according to claim 10, wherein the thin film integrated circuit and the antenna are formed over a substrate and then peeled off the substrate by removing the substrate, and stuck to the support base using an adhesive.

12. A semiconductor device according to any one of claims 1 to 3, 8 and 10, wherein the separating layer comprises a metal oxide film containing at least one selected from the group consisting of TiN, WN, Mo and W.

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13. A semiconductor device according to claim 12, wherein the metal oxide film is in a crystalline state.

14. A semiconductor device according to any one of claims 1 to 3, 8 and 10,
10 wherein the support base comprises at least one of a plastic and a paper.

15. A semiconductor device according to any one of claims 1 to 3, 8 and 10, wherein the semiconductor device is stuck to an object selected from the group consisting of a container, an envelope, a check and a passport.